

CLAIMS

1. A cytotoxic reagent comprising a ribonuclease encoded by a nucleic acid comprising SEQ ID NO:14 and conservative variants thereof, wherein the amino acid sequence is selected from the group consisting of SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:22, SEQ ID NO:24, and SEQ ID NO:26, said ribonuclease being linked to an antibody directed against a cell surface antigen present on a cancerous B cell.

2. The cytotoxic reagent of claim 1, wherein said antibody is directed against CD22.

3. The cytotoxic reagent of claim 2, wherein said antibody is LL2.

4. A method of killing malignant B cells comprising contacting cells to be killed with a cytotoxic reagent expressed by recombinant DNA, comprising a sequence selected from the group consisting of SEQ ID NO:2, SEQ ID NO:4, SEQ ID NO:6, SEQ ID NO:8, SEQ ID NO:11, SEQ ID NO:13, SEQ ID NO:15, SEQ ID NO:17, SEQ ID NO:19, SEQ ID NO:21, SEQ ID NO:24 and SEQ ID NO:26 covalently linked to a ligand binding moiety, said ligand binding moiety being directed against a cell surface antigen on the malignant B cells.

5. The method of claim 4, wherein said ligand binding moiety is an antibody.

6. The method of claim 5, wherein said antibody is a single chain antibody.

7. The method of claim 5, wherein said ligand binding moiety is an antibody directed against CD22.
8. The method of claim 7, wherein said antibody is LL2.